

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A pneumatic structural element comprising:

an elongated airtight hollow body adapted to ~~(1) that can~~ be impinged upon by compressed air, the hollow body being ~~and is~~ made of a flexible material; ;

the hollow body comprising at least one compression rod ~~(2)~~ which along a surface line of the hollow body ~~(1)~~ rests against the said hollow body and is secured against displacement and buckling; ~~; furthermore~~

the hollow body comprising at least one pair of traction elements ~~(4) which are~~ attached to the two ends of the compression rod ~~(2)~~, ~~of which there is at least one, for which purpose~~ each end of the compression rod comprises ~~(2) has~~ a knot ~~(3)~~ for mutual non-positive attachment of the compression rod (2) and the at least one pair of traction elements ~~(4)~~ and for taking up bearing forces; ~~; wherein furthermore the two traction elements (4), of which there are at least two;~~

the at least one pair of traction elements, in at least one turn are helically placed around the hollow body ~~(1)~~ in opposite directions and are adapted to intersect on a surface line ~~(7)~~ of the hollow body ~~(1)~~, ~~which wherein the~~ surface line is opposite the compression rod; ~~and (2); characterised in that wherein~~ means are provided by which at least one of the operating parameters of pressure in the hollow body ~~(1)~~, length of the compression rod ~~(2)~~, or length of the at least one pair of traction elements ~~(4)~~ can be altered pneumatically, hydraulically or mechanically.

2. (Currently Amended) The pneumatic structural element according to claim 1, wherein ~~characterised in that~~ means are provided by which the length of the compression rod ~~(2)~~ can be altered pneumatically, hydraulically or mechanically.

3. (Currently Amended) The pneumatic structural element according to claim 2, wherein ~~characterised in that~~ the length of the compression rod ~~(2)~~ is altered by means of ~~one of the~~

~~following actuators (11) or actuator units (12), namely by means of: a pressure bladder subjected to pressure or a hydraulic cylinder or a pneumatic cylinder or a lead screw or a rack and pinion combination; or in conjunction with force reversal by means of a pneumatic artificial muscle or a cable drive or a chain drive; or by means of a linear actuator unit having (12) which by means of two locking devices (10), which can be operated in turn, on both ends of a linear actuator (11); to ~~can~~ overcome multiples of a the maximum regulating distance of the this linear actuator (11).~~

4. (Currently Amended) The pneumatic structural element according to claim 1, ~~characterised in that~~ wherein means are provided by which the length of the at least one pair of traction elements (4) can be altered pneumatically, hydraulically or mechanically.

5. (Currently Amended) The pneumatic structural element according to claim 4, wherein ~~characterised in that~~ the length of the at least one pair of traction elements (4) is varied by means of ~~one of the following actuators (11) or actuator units (12), namely by means of: a pneumatic artificial muscle or a cable drive or a chain drive or a lead screw or a rack and pinion combination; or in conjunction with force reversal by means of a pressure bladder subjected to pressure or a hydraulic cylinder or a pneumatic cylinder or by means of a linear actuator unit (12) which by means of having two locking devices (10), which can be operated in turn, on both ends of a linear actuator to (11), ~~can~~ overcome multiples of a the maximum regulating distance of the this linear actuator (11).~~

6. (Currently Amended) The pneumatic structural element according to claim 1, wherein ~~characterised in that~~ means are provided by which compressed air can be supplied to, or removed from, the hollow body (1).

7. (Currently Amended) The pneumatic structural element according to claim 1, further comprising a plurality of ~~claims 1 to 6, characterised in that~~ sensors for measuring the variable operating parameters of interior pressure in the hollow body, length or stress of the compression rod (2) or length or stress of the at least one pair of traction elements (4) ~~are present, as well as in that an electronic control and regulating device is present.~~

8-10. (Canceled)

11. (New) The pneumatic structural element according to claim 1, further comprising an electronic control and regulating device for maintaining interior pressure in the hollow body.